

CNB's New Forecast

Inflation Report IV/2008

Tomáš Holub

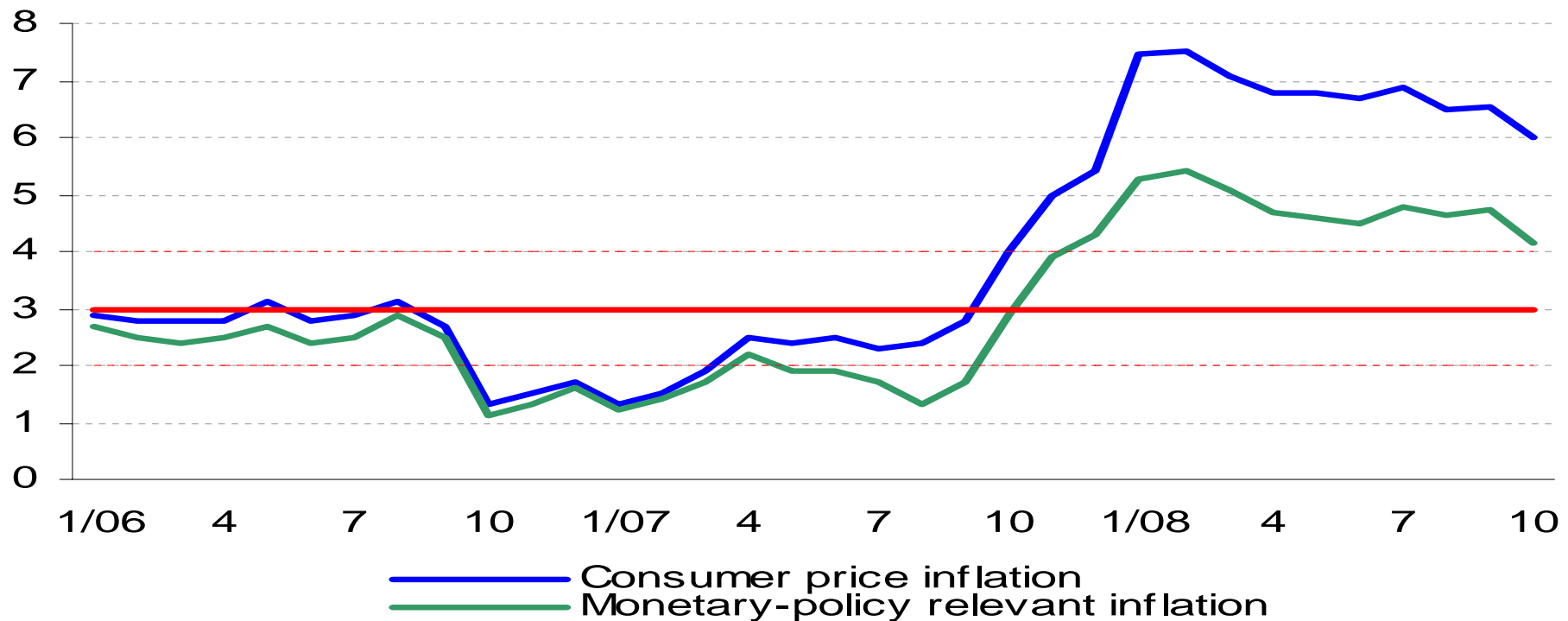
Monetary and Statistics Department

Meeting with analysts, Prague, 14 November 2008

Outline

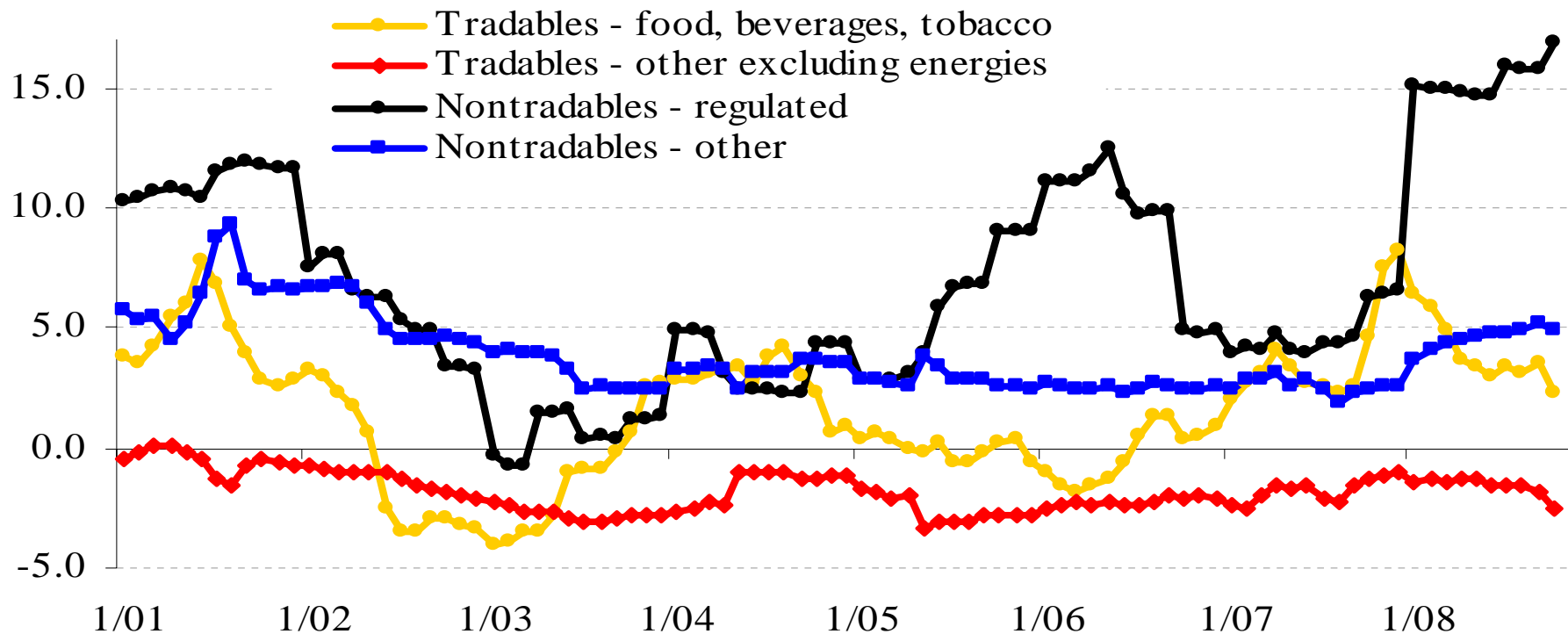
- Recent trends in inflation and the economy;
- External assumptions of the forecast;
- Fiscal policy;
- Inflation forecast and the interest rate trajectory;
- Regulated prices and tax changes;
- Inflationary factors (domestic and imported);
- Alternative scenario + sensitivity to oil prices;
- Publication of the exchange rate forecast from 2009.

Inflation



- Inflation in Q3/08 slightly below forecast (by 0.3 p.p.) due to food and fuel prices;
- Oct. 2008: headline inflation (6.0 %) and MP inflation (4.2 %), i.e. by 0.4 p.p. below the new forecast (partly due to delayed increase in cigarette prices).

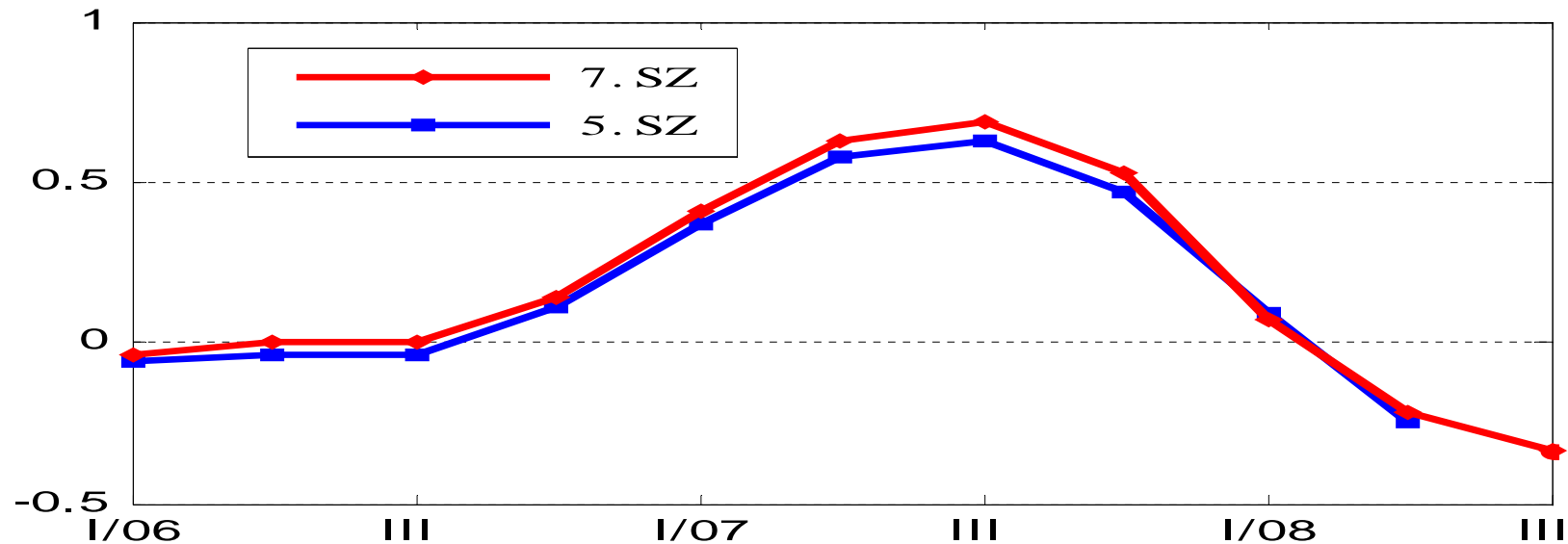
Structure of Inflation (excluding taxes)



- Faster growth in regulated prices (natural gas and heating);
- Decreasing growth in food and other tradable prices;
- The growth in non-tradable prices may have peaked.

Overall Inflationary Pressures

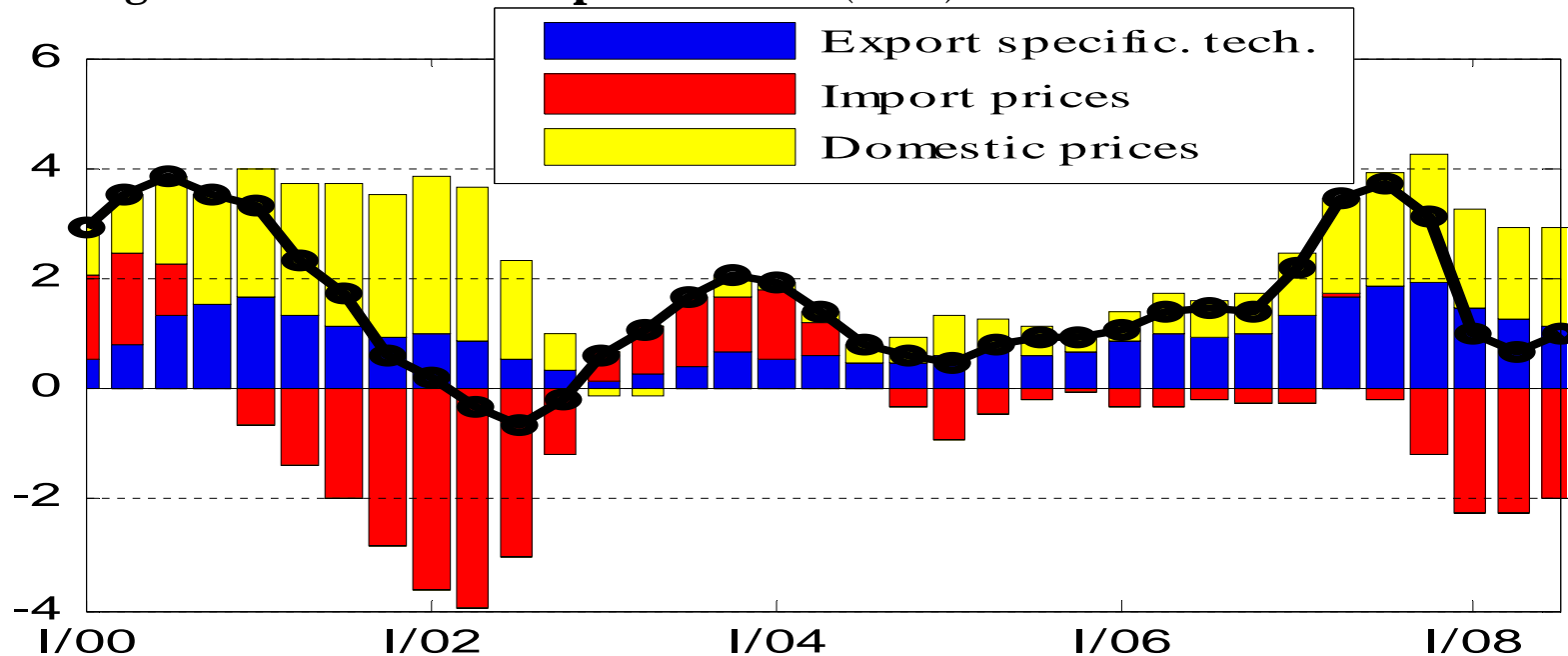
Real marginal cost gap, consumer goods sector (in %)



- Overall pressures turned slightly anti-inflationary;
- Assessment almost unchanged compared to the previous forecast (data broadly in line with the forecast's story);

Domestic Pressures vs. Import Prices

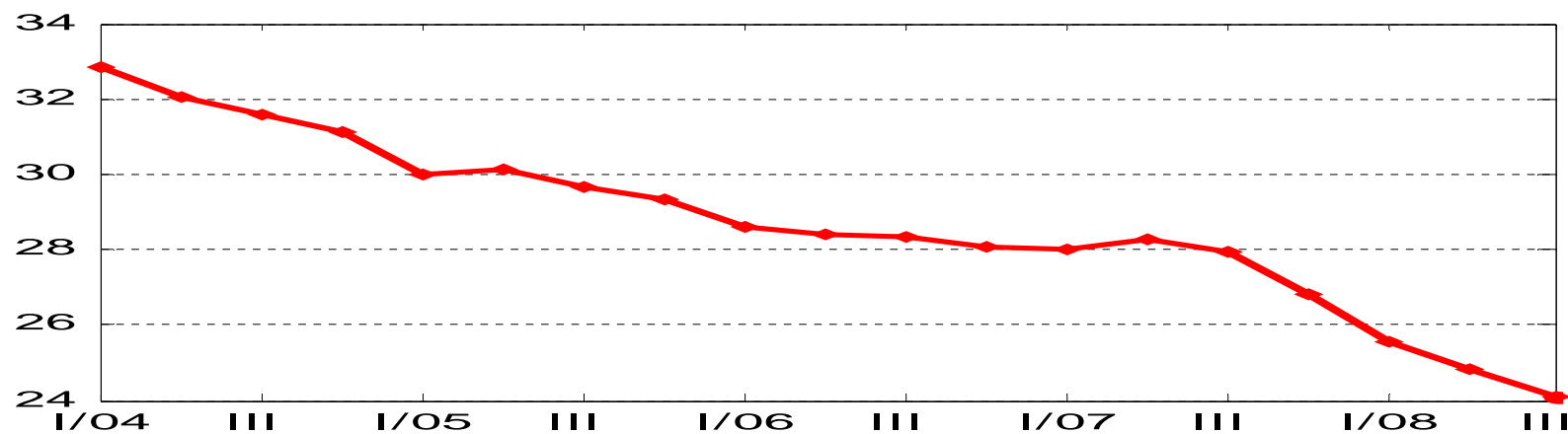
Nominal Marginal Cost in Consumption Sector (in %)



- Domestic economy still generating pro-inflationary pressures, but these are gradually weakening;
- Anti-inflationary impact of the CZK vs. high foreign PPI.

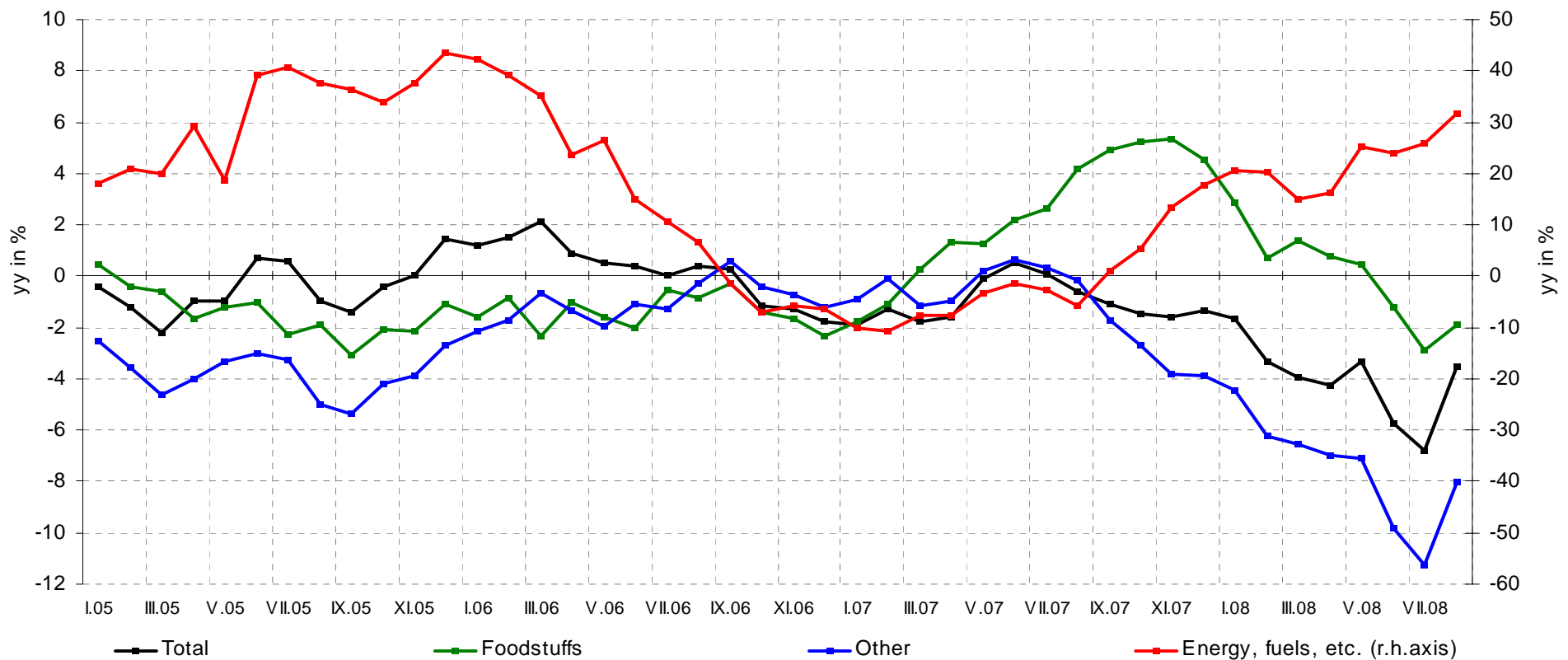
Exchange Rate

Nominal exchange rate (CZK/EUR)



External forecasts of CZK/EUR			
Date of forecast	Next quarter	1Y horizon	
	CF	CNB's survey	CF
10/07	27.6	26.9	27.6
1/08	26.2	25.8	26.2
4/08	25.4	25.2	25.5
7/08	24.0	24.6	24.3
10/08	24.7	24.7	24.4

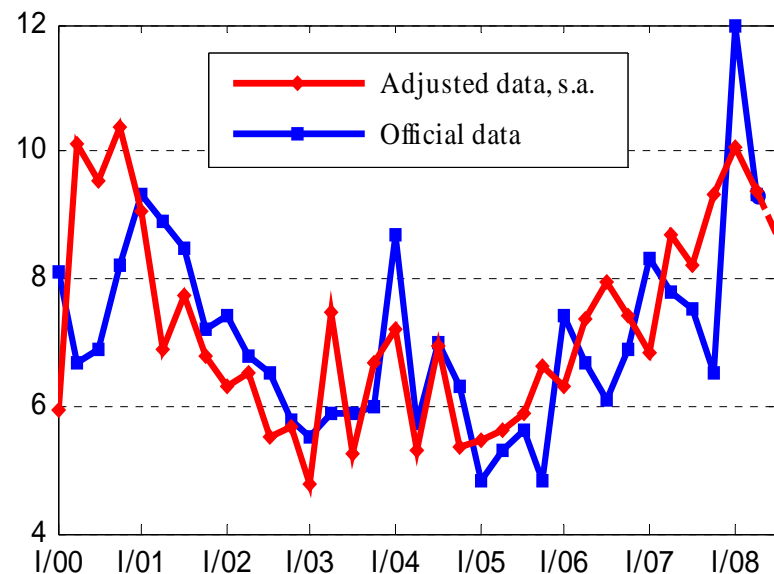
Import Prices



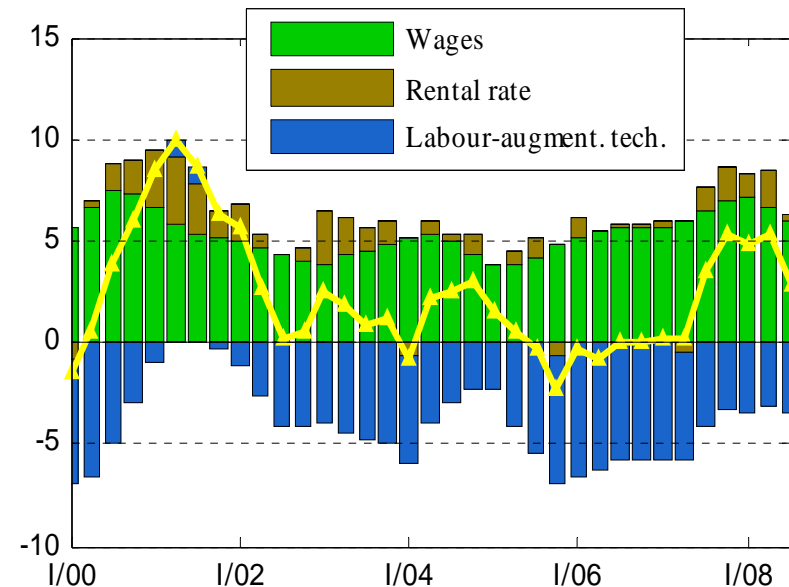
- Import prices ex food and energy falling sharply;
- Import food prices now decreasing as well;
- Still fast growth of fuel and energy prices, but....

Domestic Pressures

Nominal Wages (y/y in %)



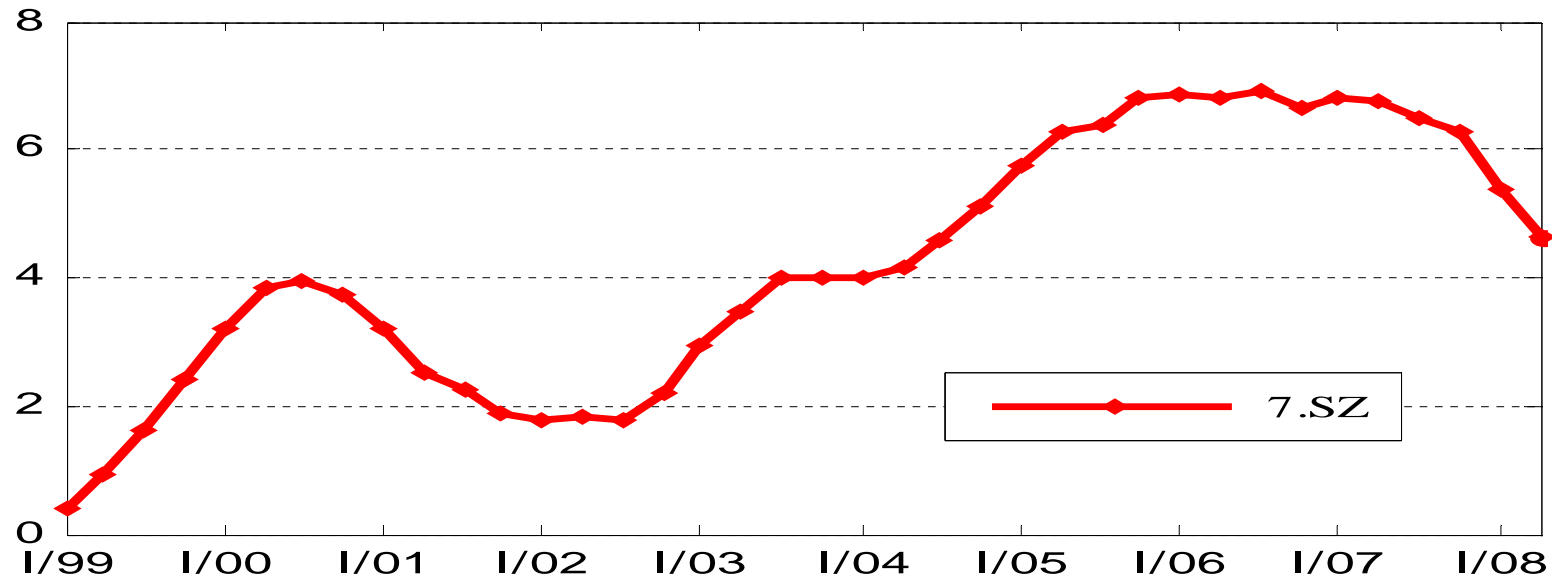
Nominal Marginal Cost in Domestic Production – Components (q/q in %, ann.)



- A slow-down in the nominal wage growth (even after elimination of one-off factors);
- Continued weakness in the productivity growth;
- NULC increase: 4.3 % y/y in Q2/08.

GDP Growth

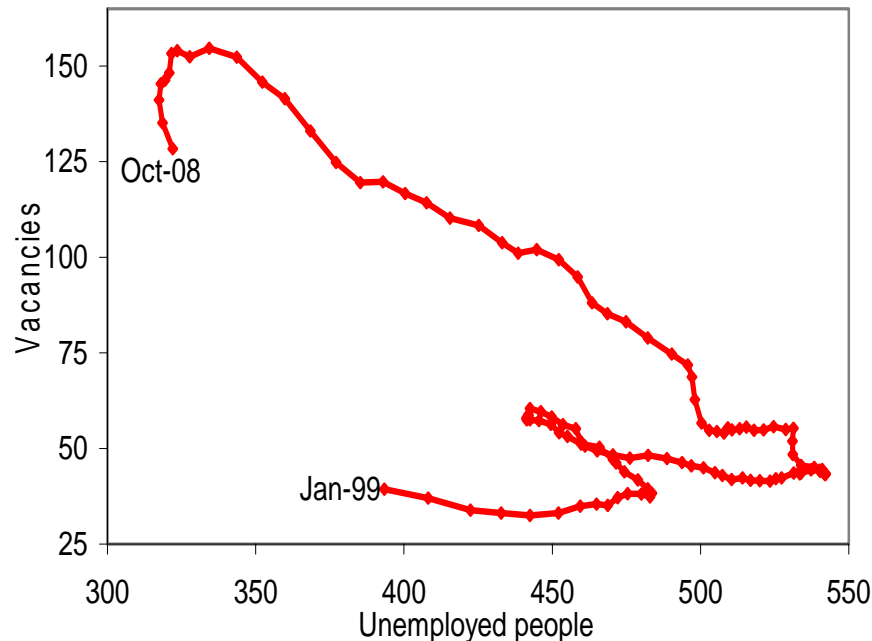
GDP growth (y/y in %)



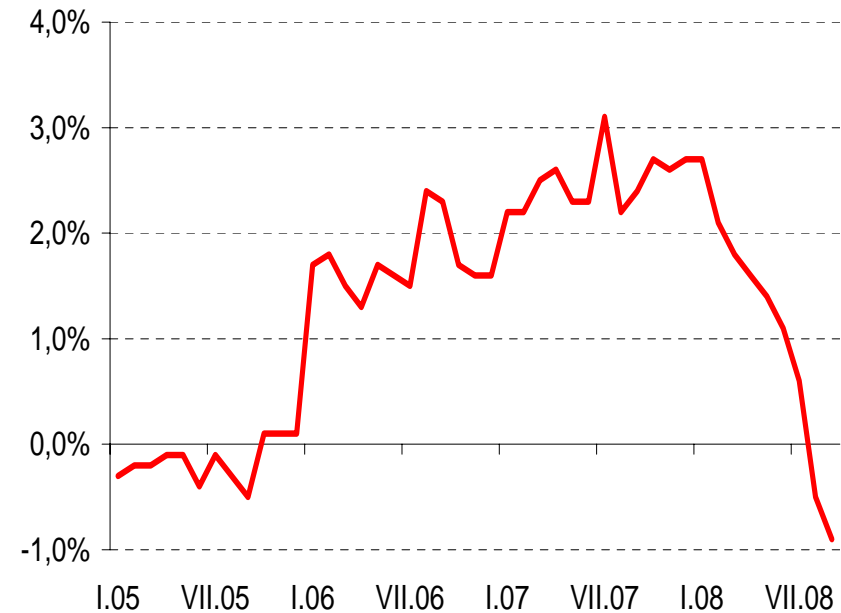
- The economic slowdown continues (4.6 % y/y in Q2/08);
- A drop in total investments (mainly inventories);
- Net exports still having a big positive contribution;
- Weakening trend of growth in industry and retail sales.

Labour Market

Berger curve (No. Of persons in thousand; seasonally adjusted)

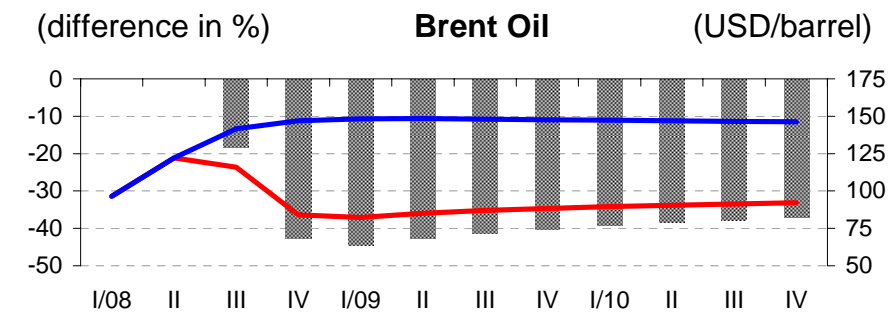
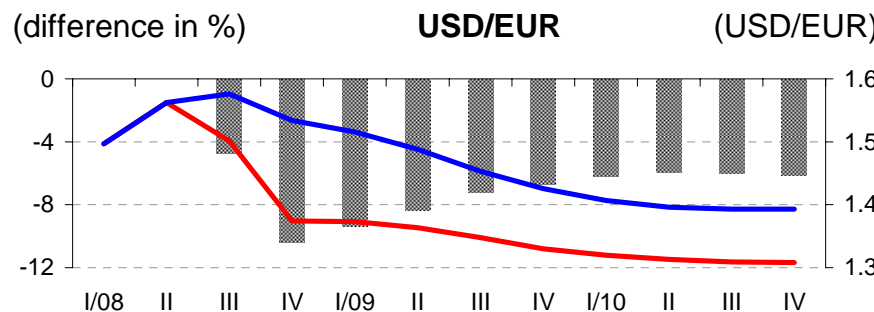
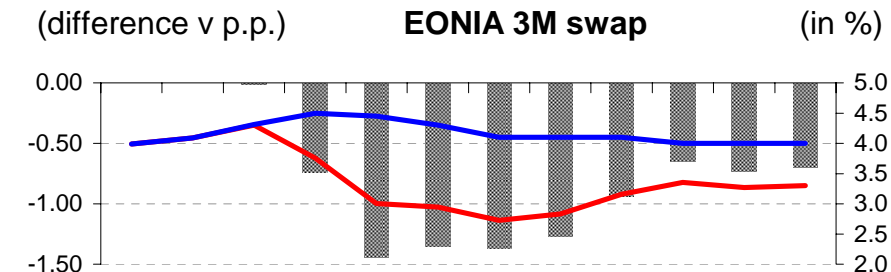
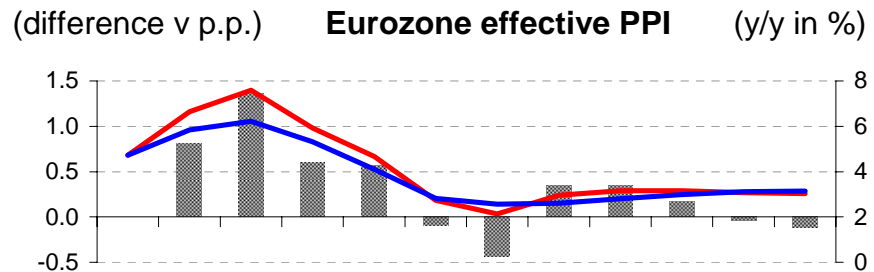
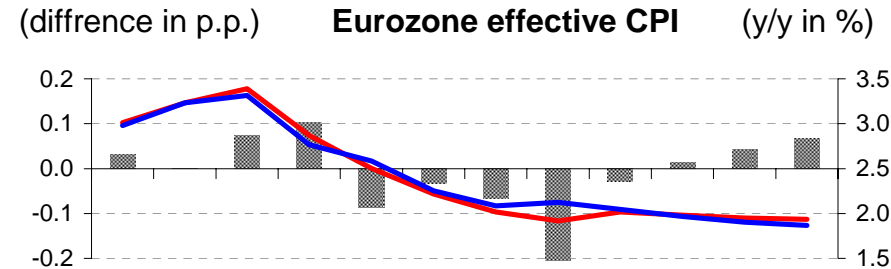
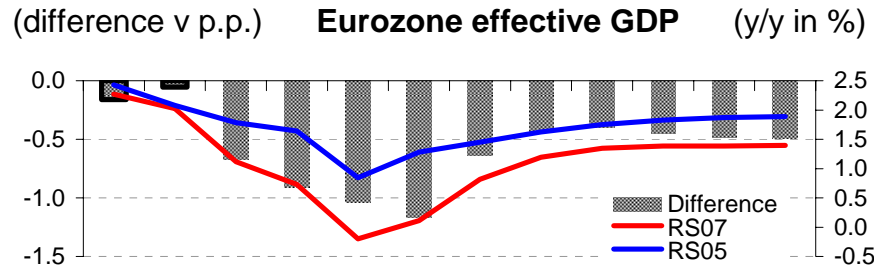


Employment in industry (y/y change)



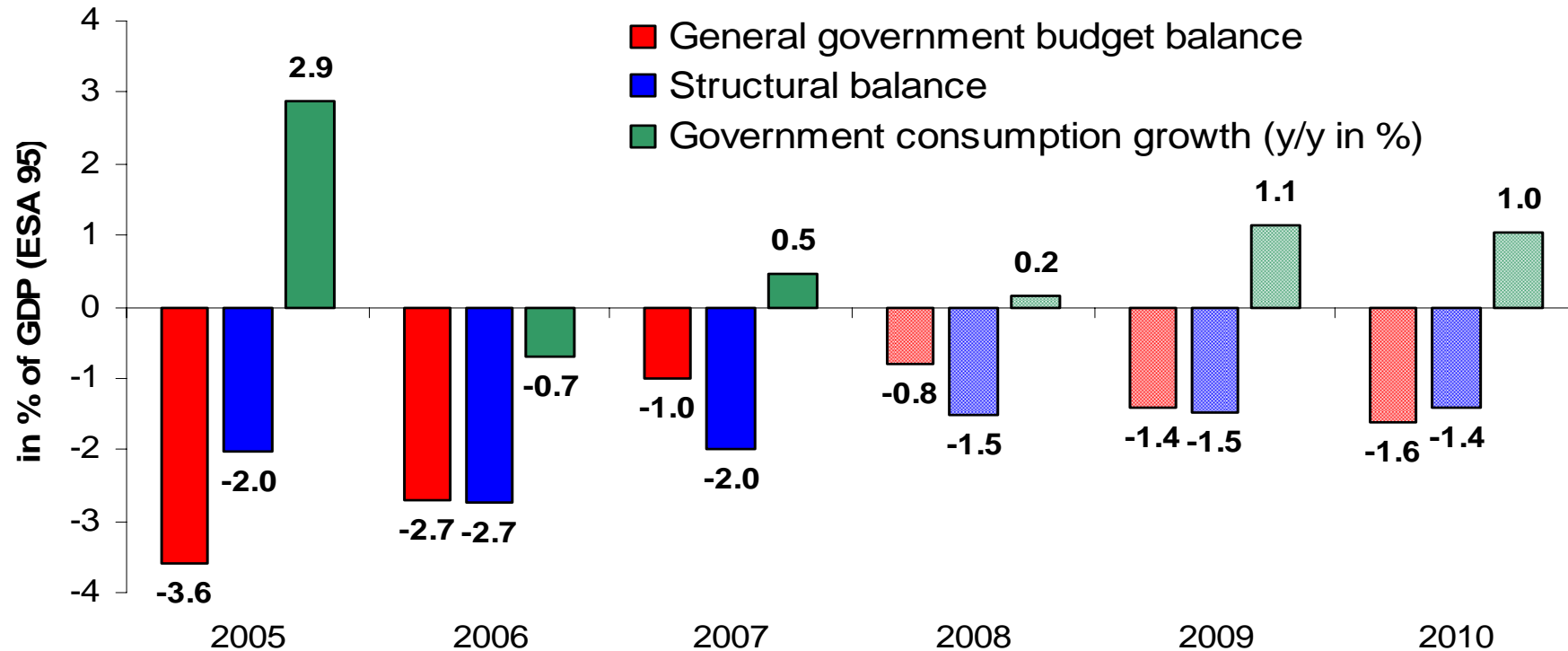
- Employment growth (1.5 % y/y in Q3/08) slowing down;
- Number of vacancies falling, unemployment stagnating;
- Employment in industry sharply turned to decreasing.

External Assumptions (CF10)



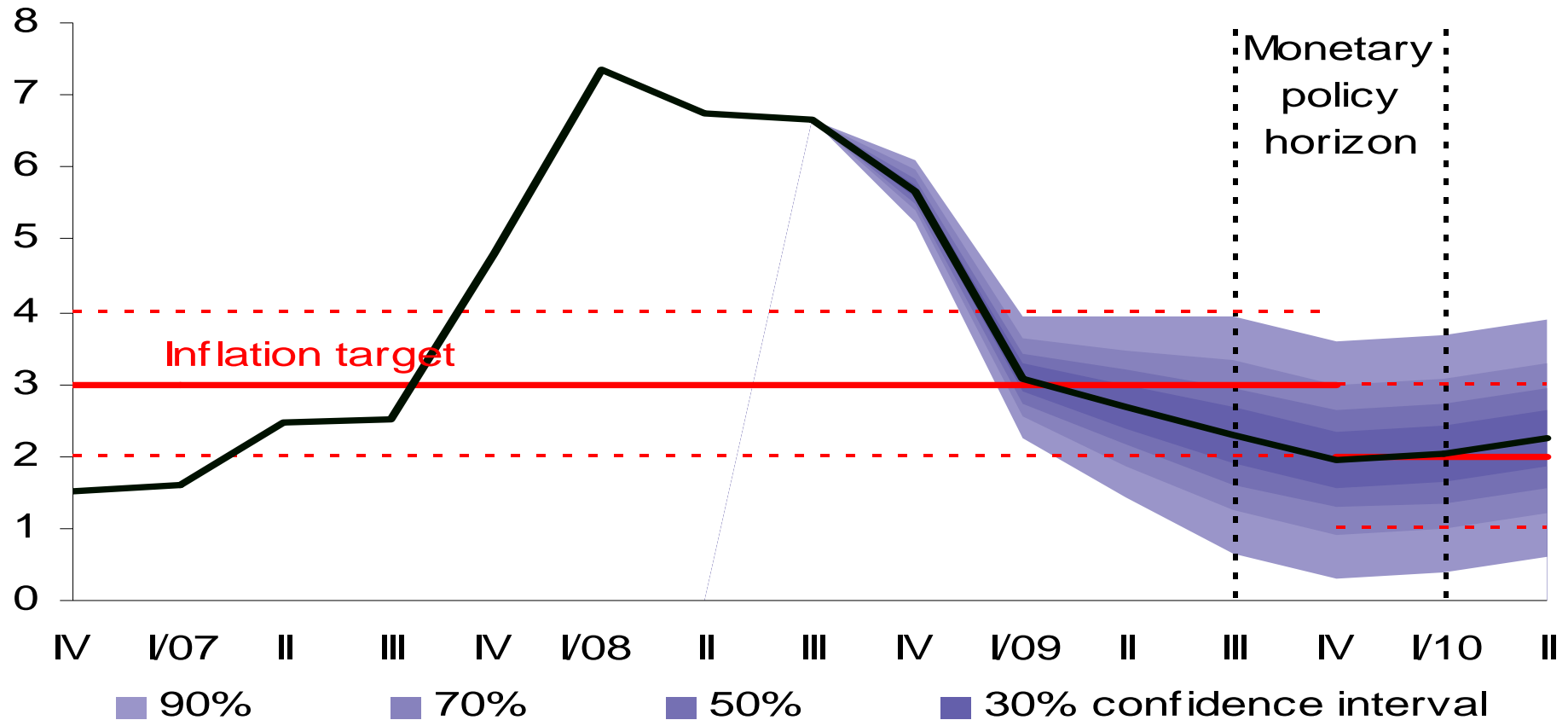
- Reduced GDP growth, oil price and interest rate outlook;
- Clear further downside risk (alternative scenario).

Fiscal Situation



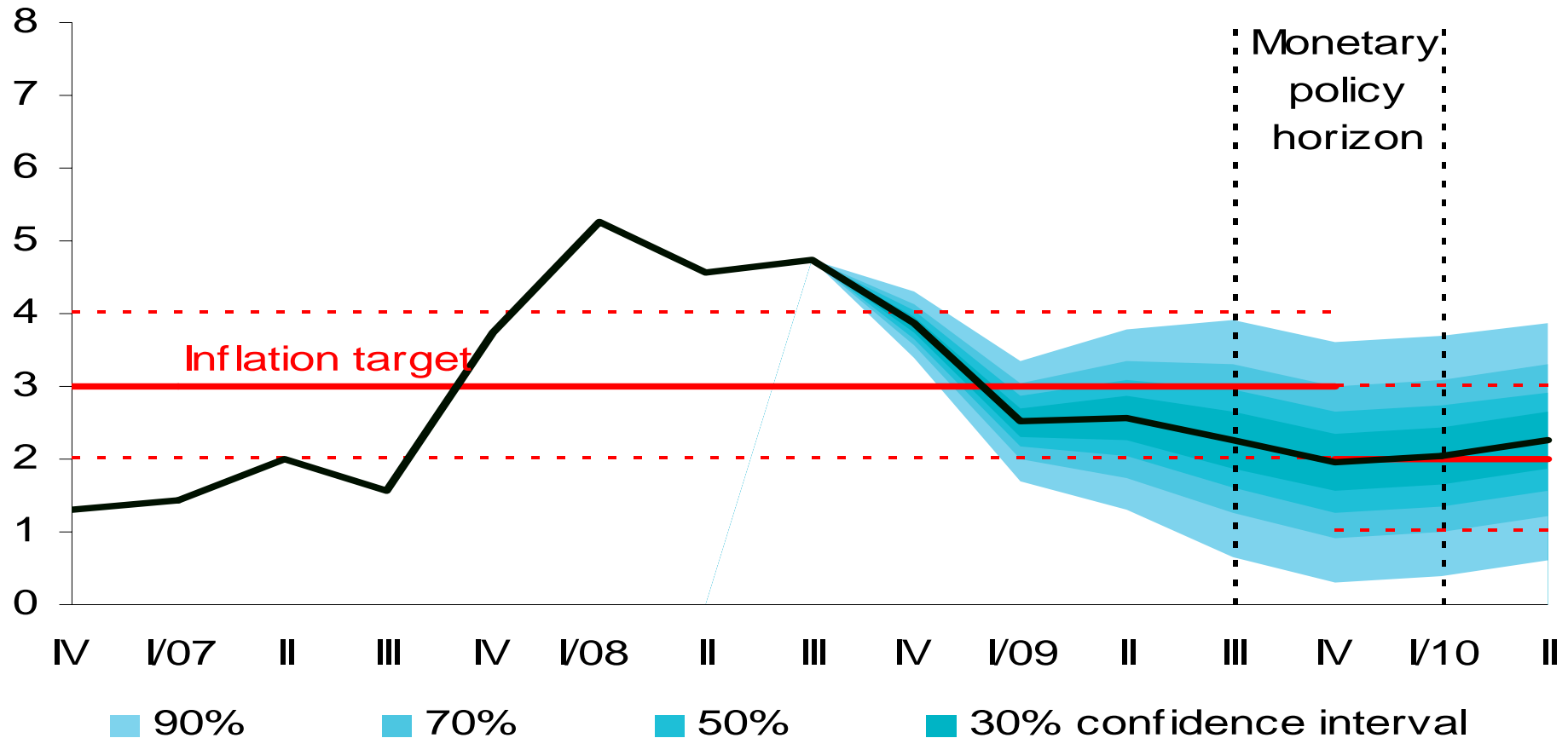
- Deficit in 2007 revised down to 1.0 % of GDP;
- Structural deficit around 1.5 % of the GDP in 2008-10;
- Increasing deficit due to cyclical factors (upside risk);
- Moderate growth of government consumption.

Headline Inflation Forecast



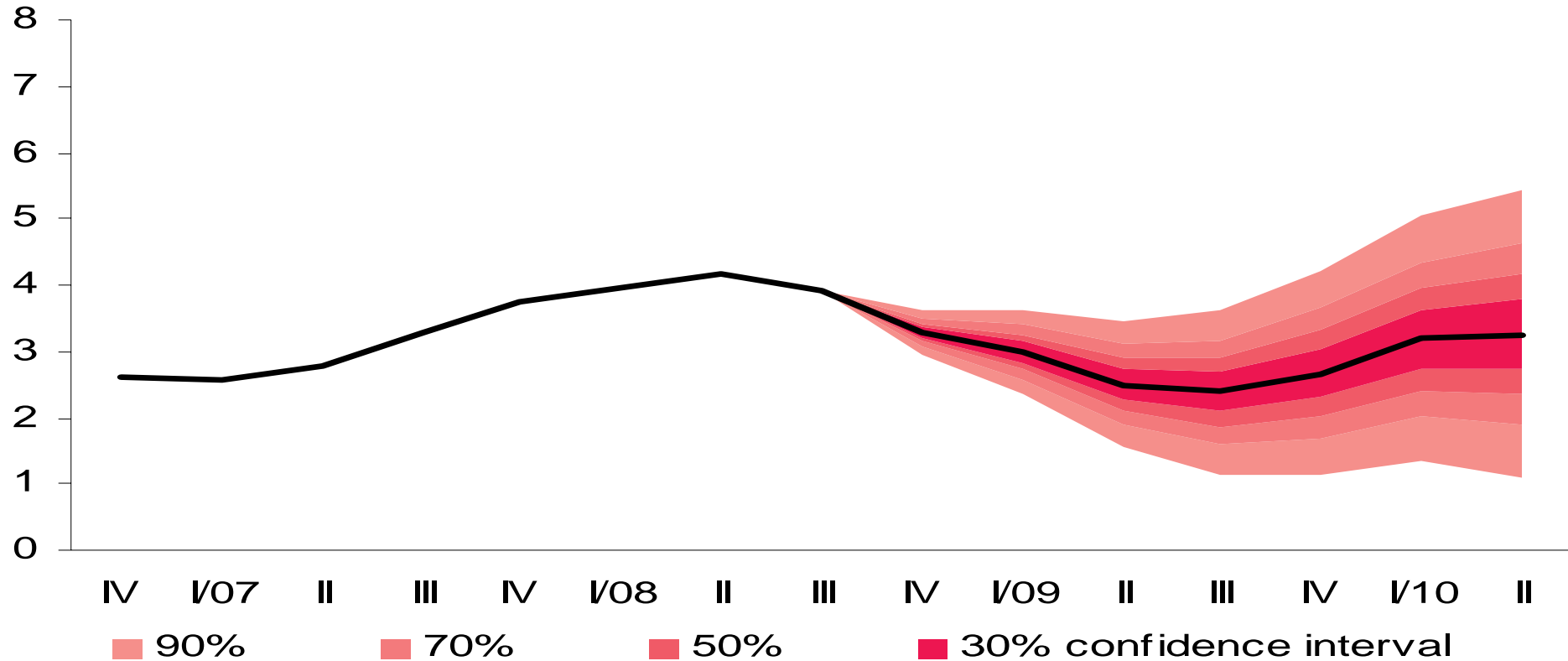
- The forecast has been brought down;
- Inflation heading towards the 2% target on the MP horizon.

MP Inflation Forecast



- MP inflation will fall towards the 3% target in Nov. 2008;
- The impact of tax changes will fade away in 2009.

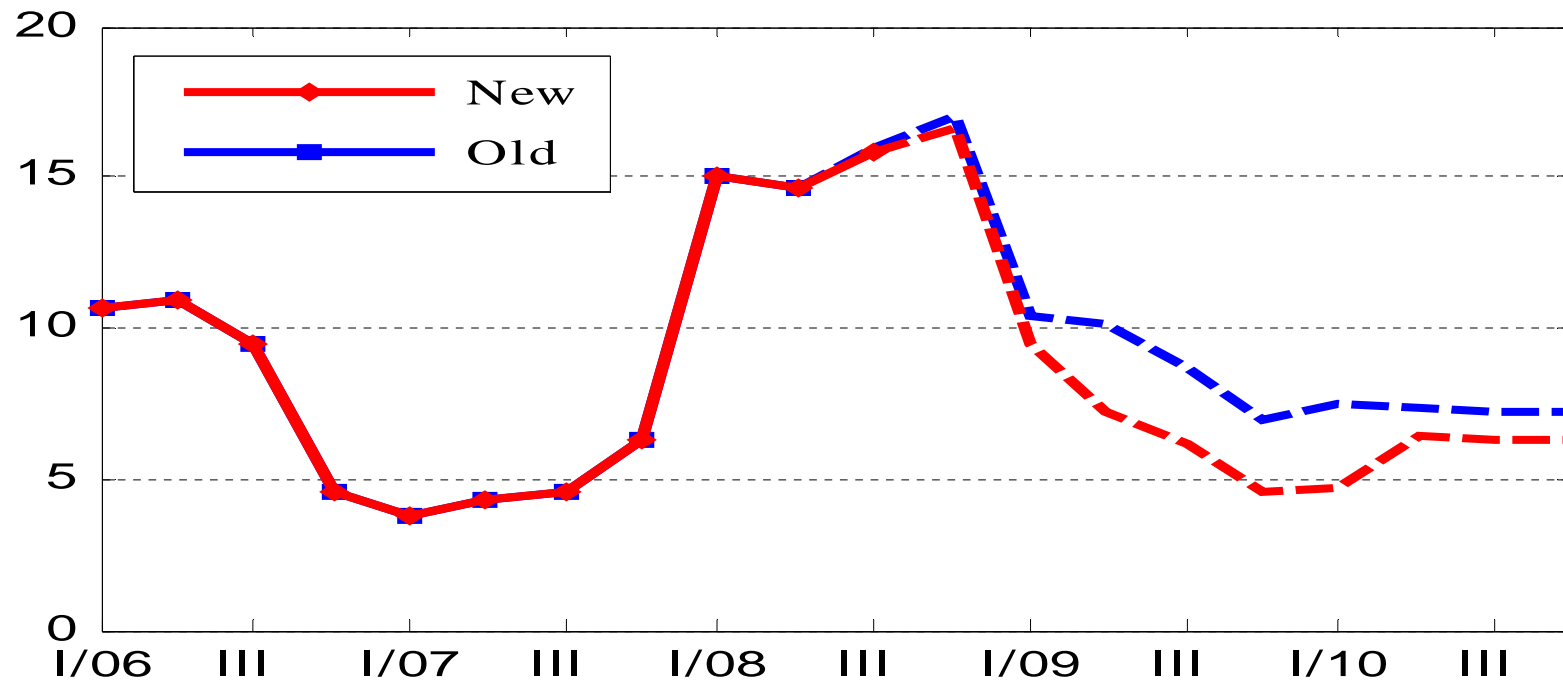
Interest Rate Forecast



- Consistent with the forecast and its assumptions is a decline in interest rates followed by a modest rise in late 2009/early 2010.

Regulated Prices

Growth of regulated prices (y/y in %)



- Forecast decreased due to lower international energy prices and assumed smaller increase in regulated rents in 2010.

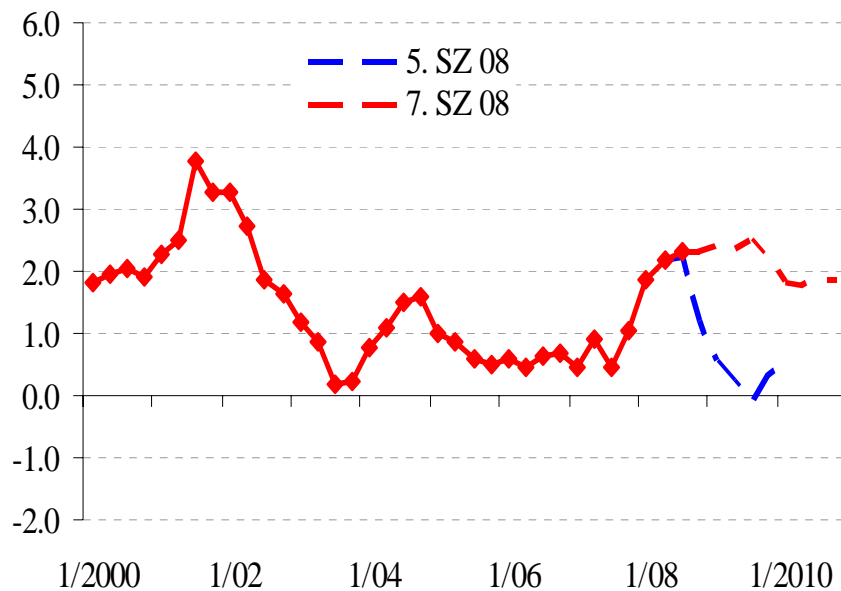
Administrative Measures (selected items and total impact)

	2008		2009		2010	
	Y/Y growth	Impact in p.p.	Y/Y growth	Impact in p.p.	Y/Y growth	Impact in p.p.
Regulated prices - total	16.6	2.85	4.6	0.87	6.3	1.23
of which (selected items):						
Regulated rents	23.0	0.40	27.0	0.54	28.5	0.72
Electricity	9.5	0.37	10.0	0.40	7.0	0.30
Natural gas	34.1	0.76	-11.8	-0.33	0.0	0.00
Heating	11.0	0.33	4.0	0.13	2.0	0.07
Healthcare	43.0	0.58	2.0	0.04	2.0	0.04
Primary impact of tax changes on non-regulated prices		1.43		0.00		0.00

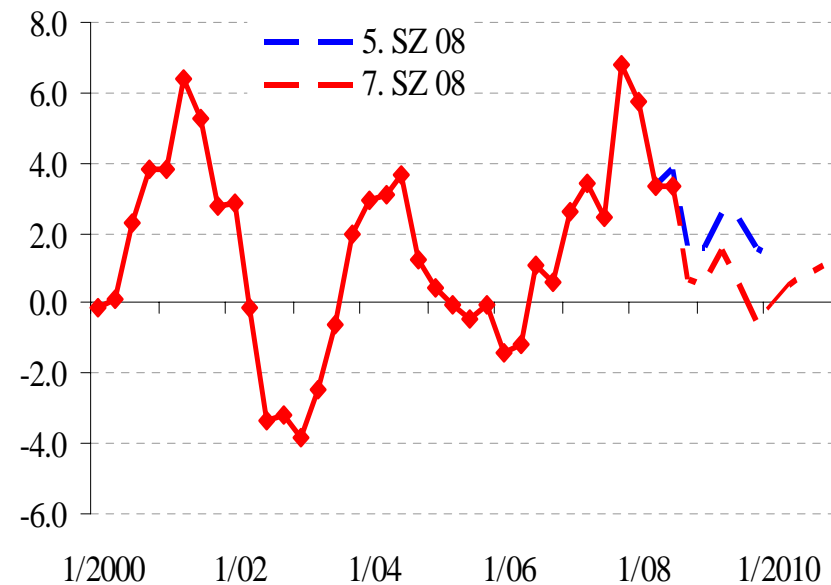
- Overall impact of administrative measures will drop from 4.3 p.p. at the end of 2008 to 0.9-1.2 p.p. in 2009-2010.

Core Inflation and Food Prices

“Core” inflation (in %, excl. tax changes)



Food price growth (in %, excl. tax changes)



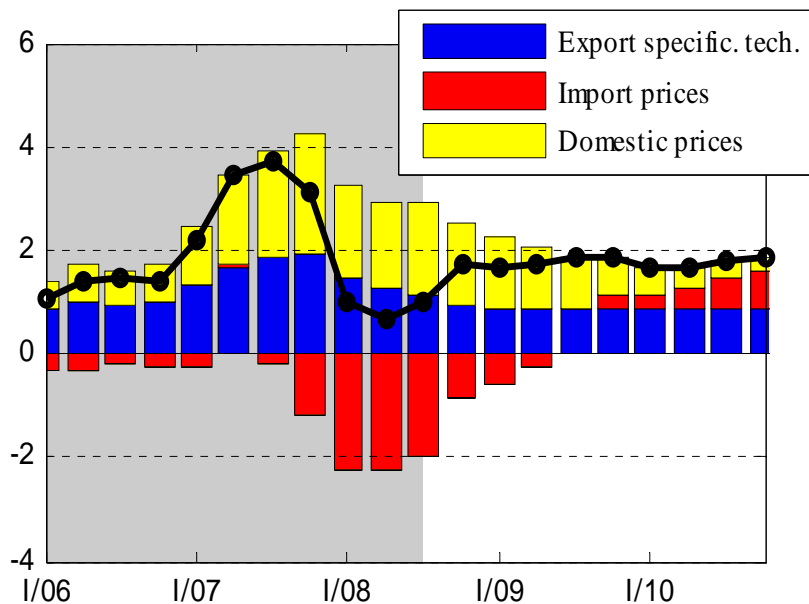
- Forecast of market-determined prices („net inflation“) decreased due to lower inflation in Q3/08, anti-inflationary external factors and weaker GDP growth outlook;



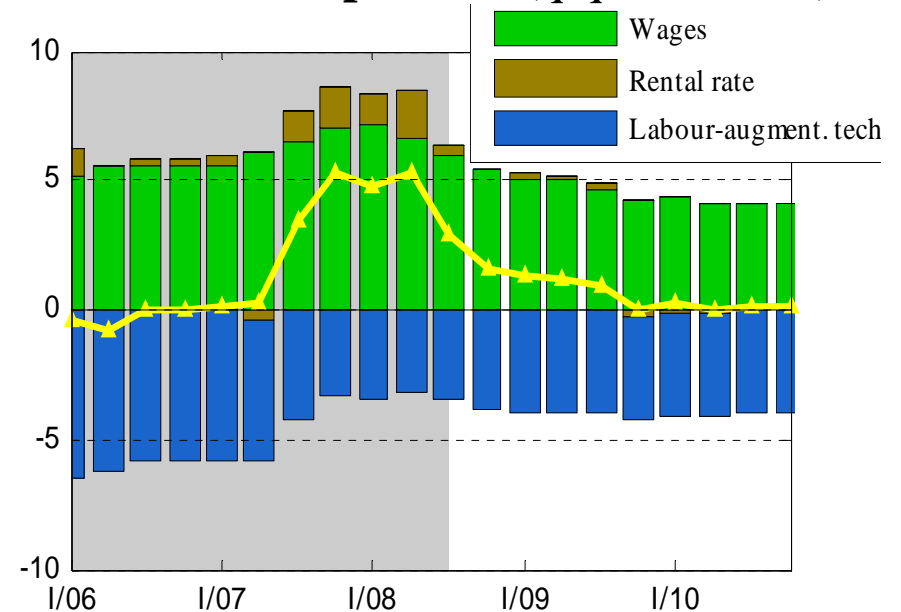
- New decomposition into food prices, core inflation and fuel prices (but also a reflection of fundamental factors).

Inflationary Pressures

Nominal Marginal Cost in Consumption Sector – Components (q/q in %, ann.)



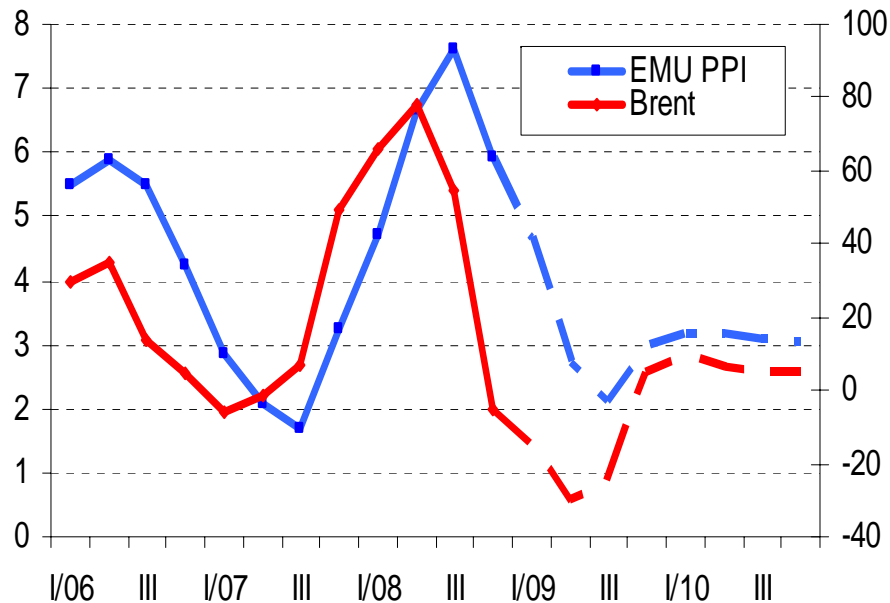
Nominal Marginal Cost in Domestic Production – Components (q/q in %, ann.)



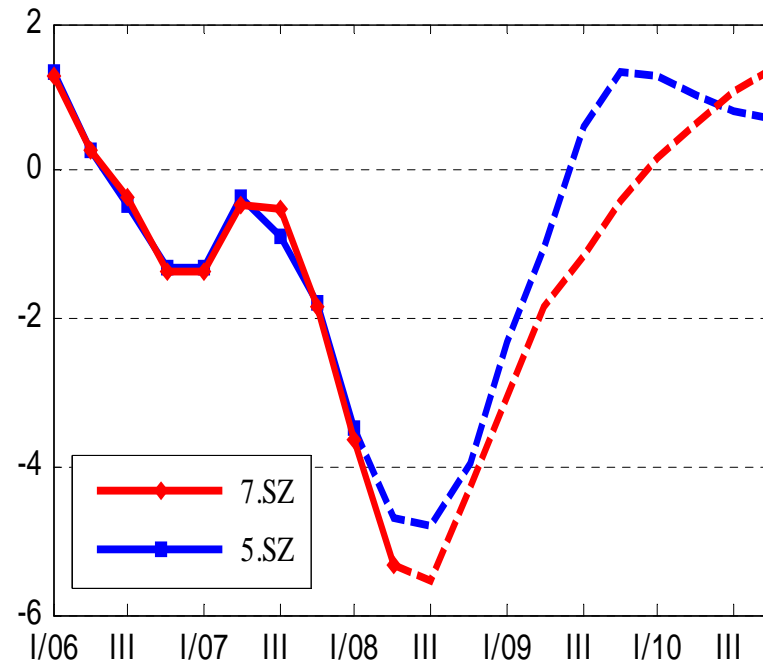
- The anti-inflationary impact of the CZK will be fading away;
- But domestic inflationary pressures will be also subsiding due to slower growth of real GDP and nominal wages.

Import Prices

EMU PPI and Brent Oil (y/y in %)



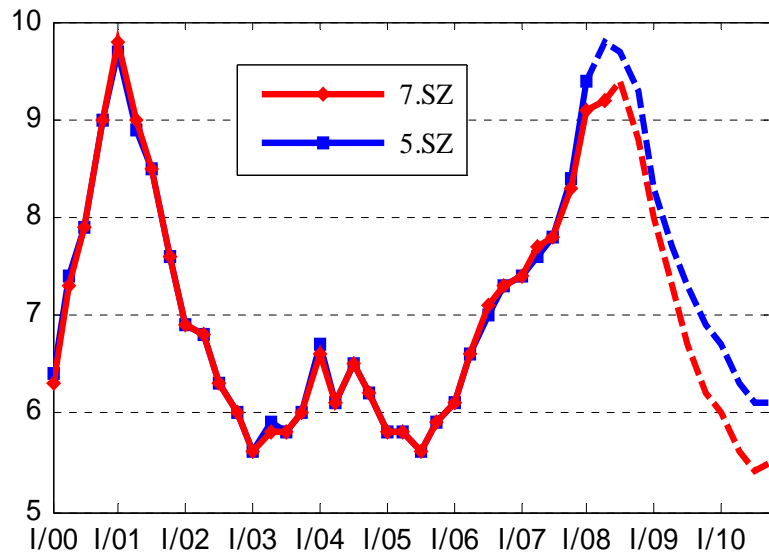
Import Prices (y/y in %)



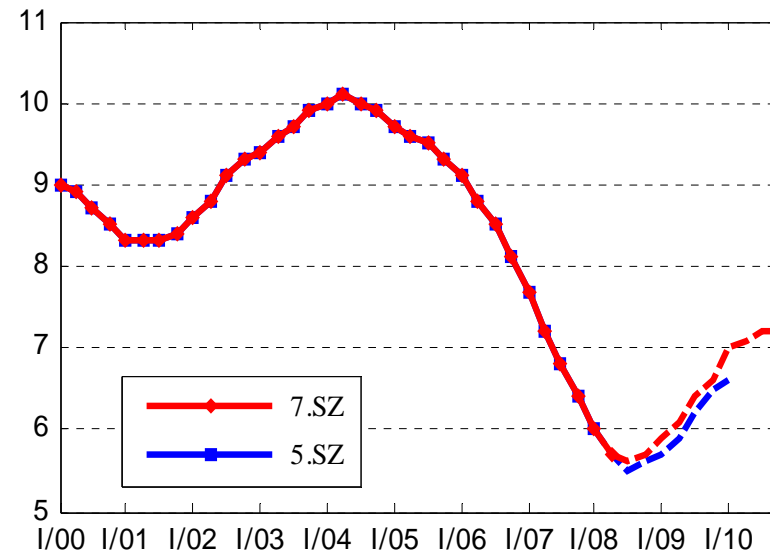
- The impact of the strong exchange rate (despite its initial correction) will dominate in the short term;
- External inflationary pressures will ease substantially.

Nominal Wage Growth

Nominal wage growth in business sector
(y/y in %, seasonally adjusted)

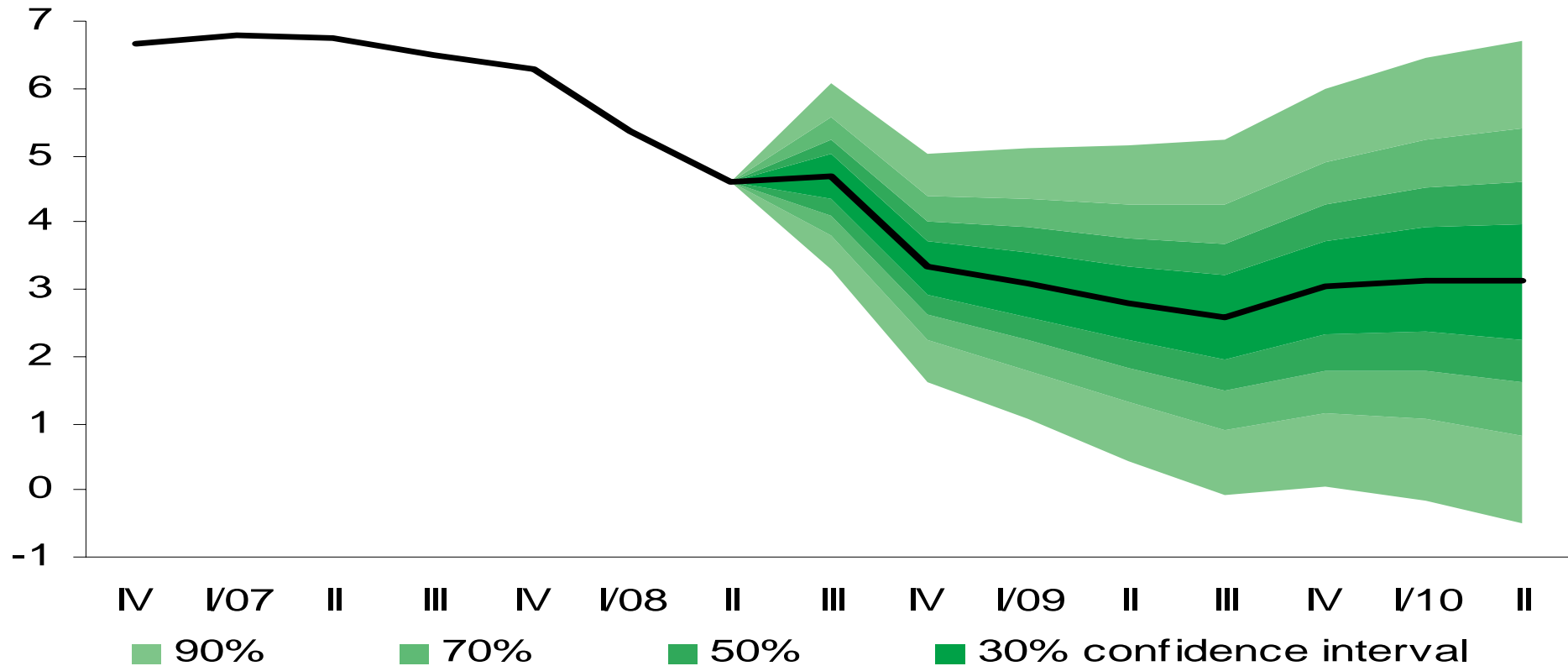


Total registered unemployment (in %, seasonally adjusted)



- Wage growth will fall down quickly;
- Previously identified upward risk faded away;
- Unemployment rate will start increasing soon.

GDP Growth Forecast



- Pronounced deceleration of growth in 2008-09, recovery in 2010 only modest (and dependent on global outlook);
- Forecast revised down.

GDP Growth Forecast

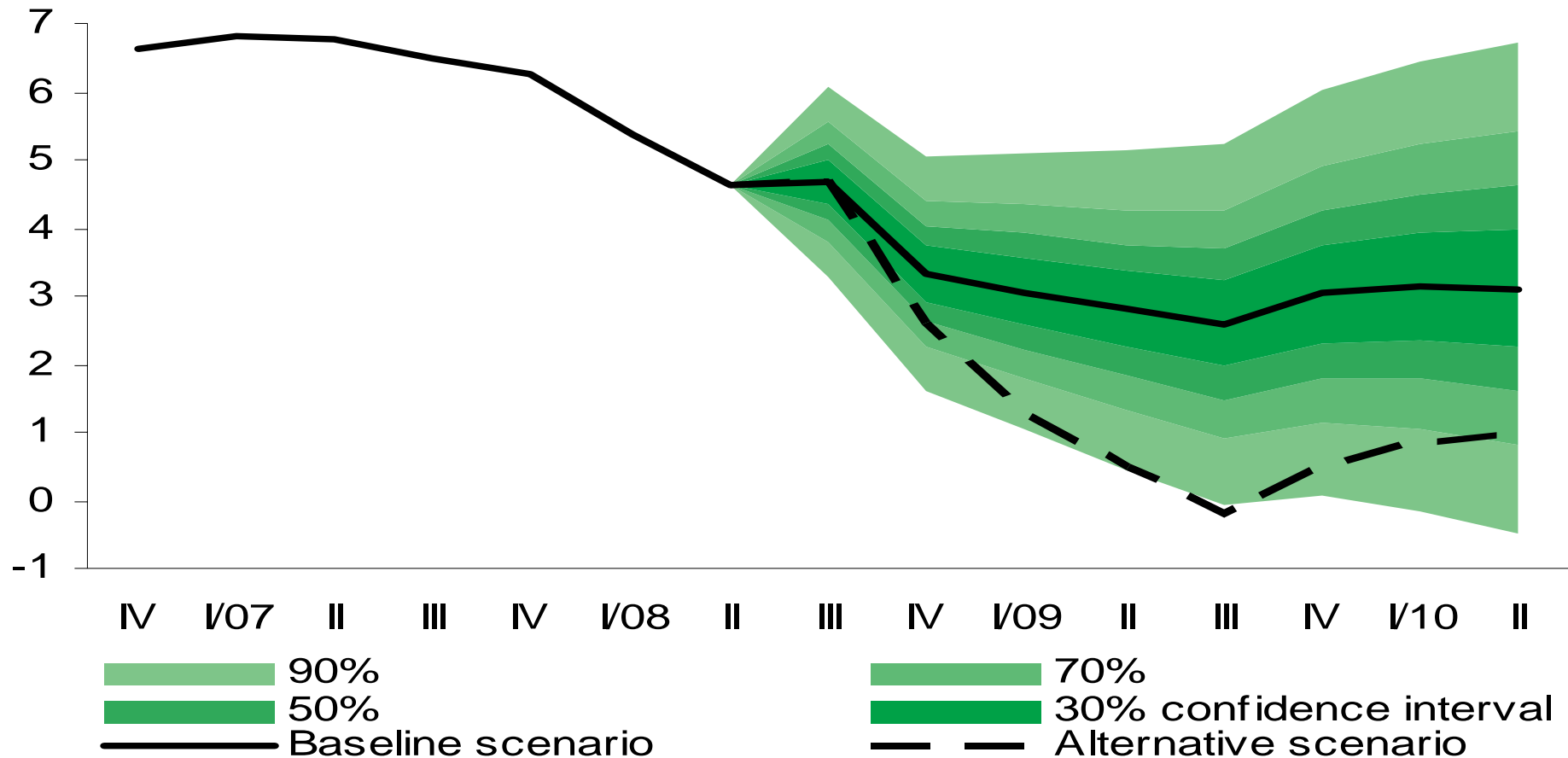
y/y change	2008	2009	2010
Gross domestic product	4.5	2.9	3.1
Household consumption	3.0	3.5	3.5
Government consumption	0.3	1.2	1.0
Investment	3.6	3.0	4.3
Exports	12.0	6.2	7.0
Imports	9.2	6.1	7.4

- Slowdown in investment and export growth (weak foreign demand, strong exchange rate, impact of financial crisis);
- Only gradual recovery of household consumption (drop in inflation and low real interest rates vs. decelerating wage growth and higher unemployment).

Summary of the baseline forecast

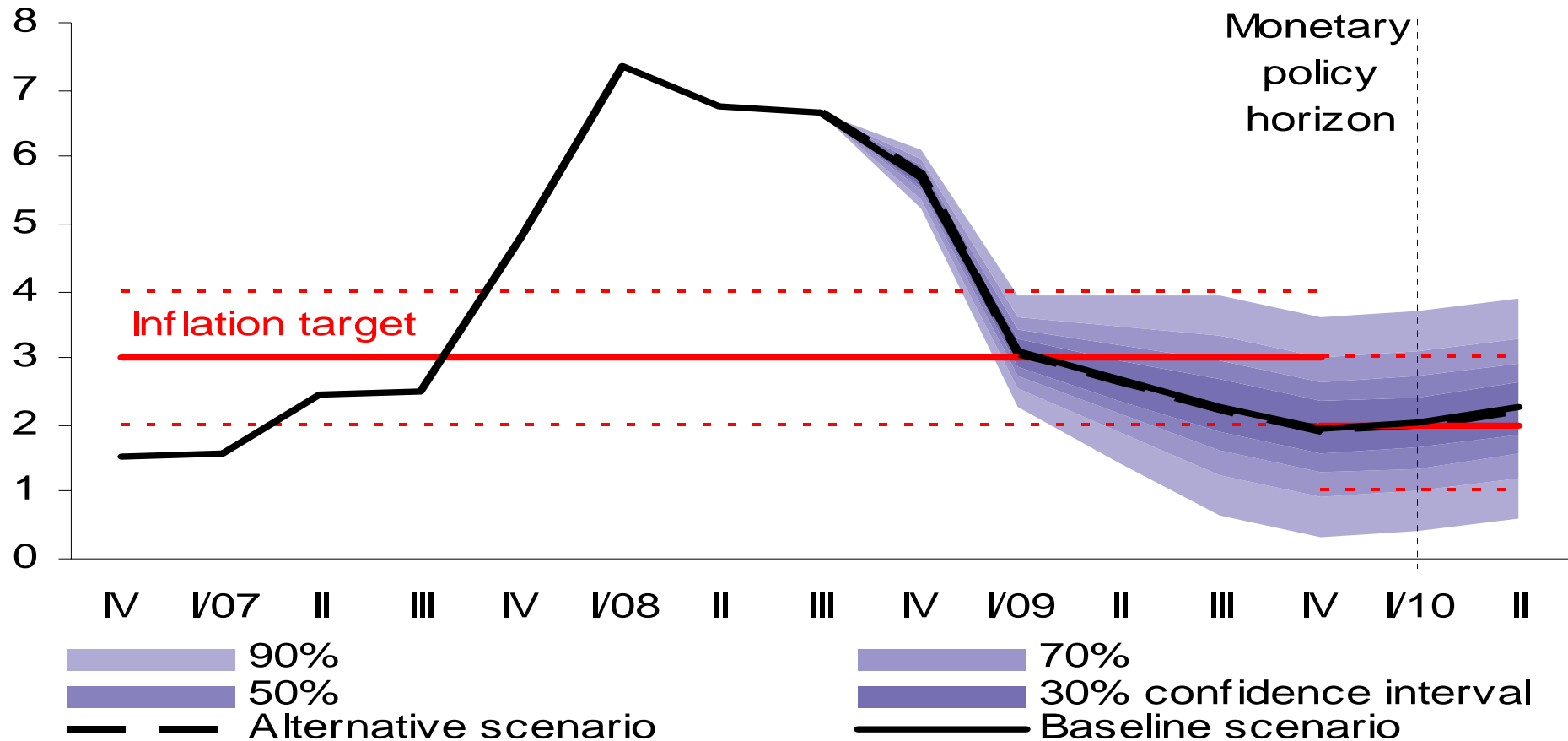
- Economy is slowing down visibly;
- Domestic pro-inflationary factors have passed the peak;
- More than offset by anti-inflationary exchange rate;
- Inflation will fall to 2 % during 2009;
- Forecast of both regulated and market prices decreased;
- Deeper and longer-than-expected period of slow growth ;
- Wage growth is going to weaken substantially;
- Interest rates: a decline in interest rates followed by a modest rise in late 2009/early 2010;
- Uncertainties related to the financial crisis.

GDP Growth Forecast – Alternative Scenario



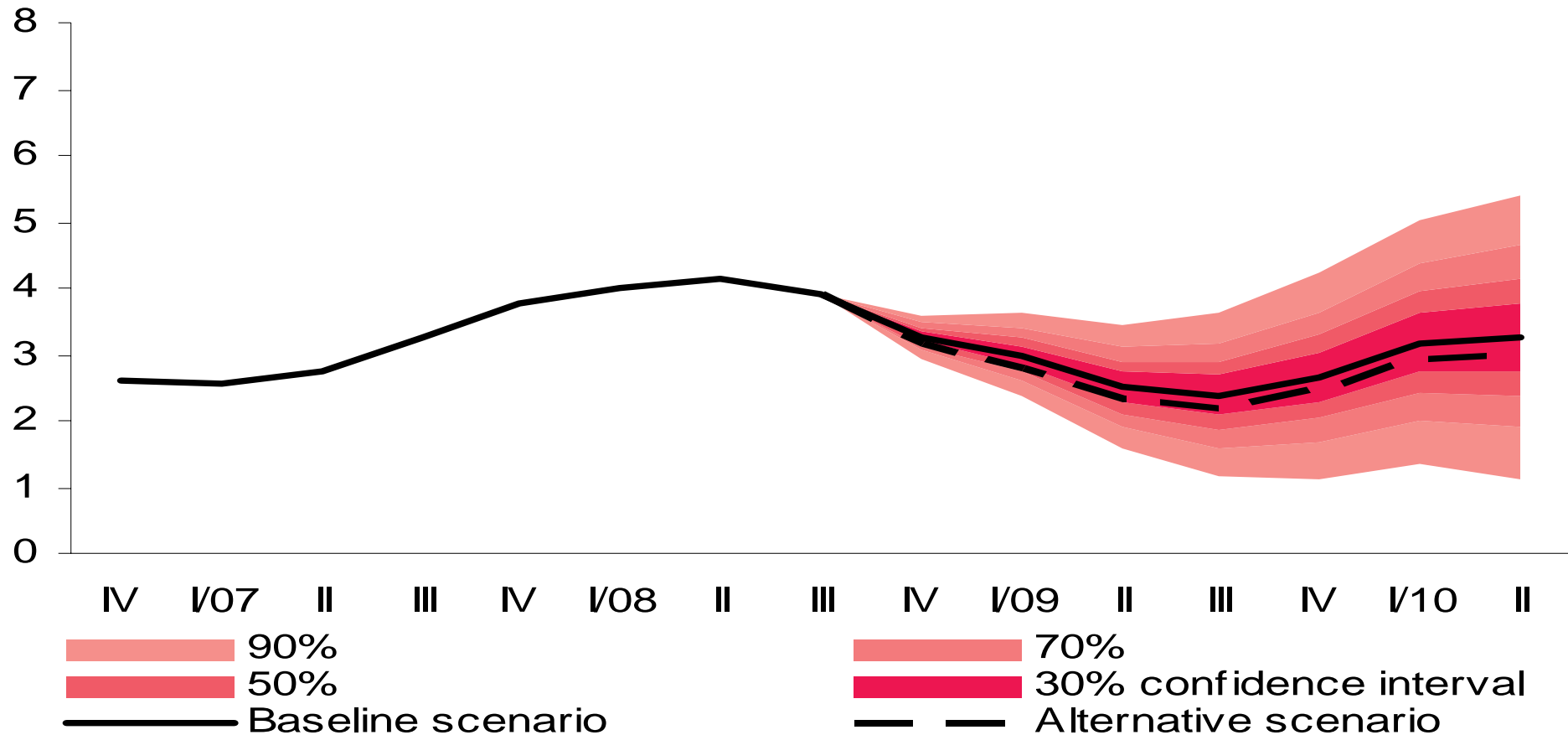
- More pronounced GDP growth slowdown due to foreign recession (simulated by NiGEM) and lower productivity.

Headline Inflation – Alternative Scenario



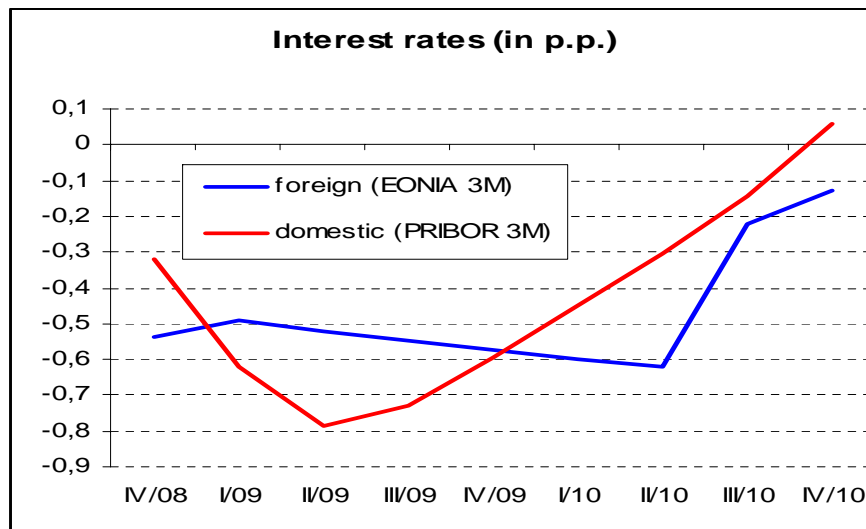
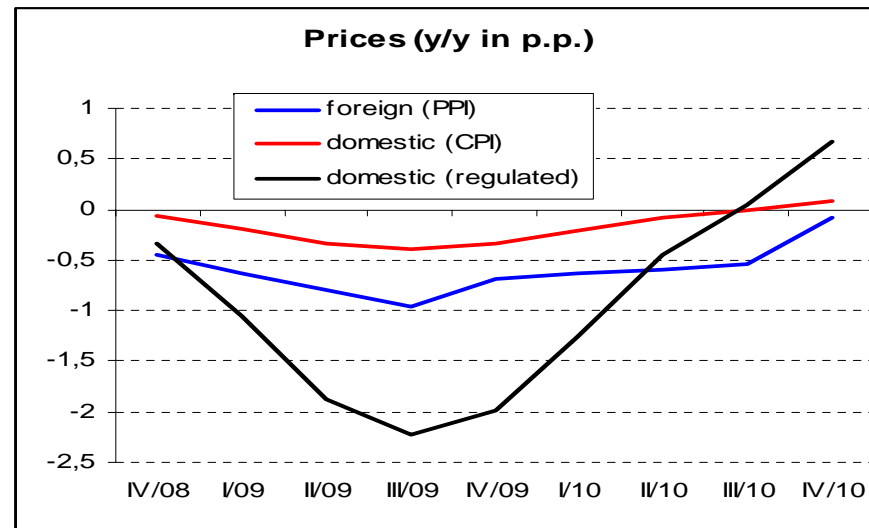
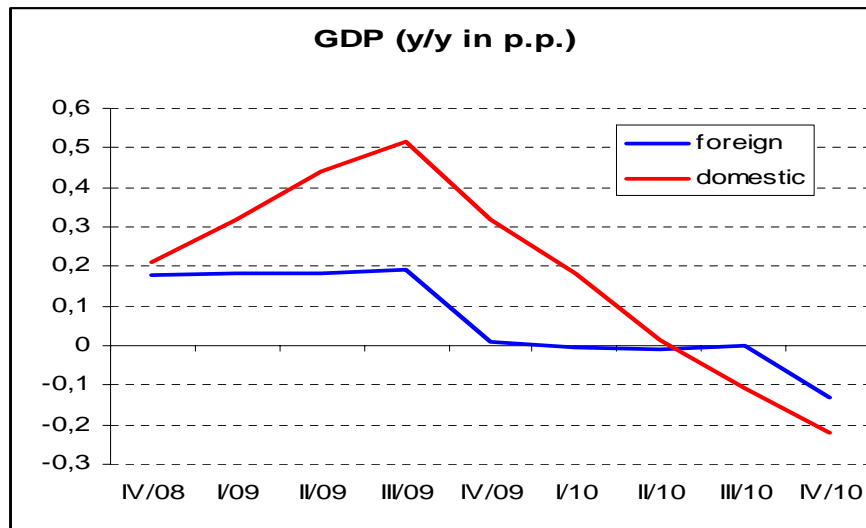
- But impact on inflation negligible (drop in GDP growth vs. weaker exchange rate and lower productivity).

Interest Rate Forecast – Alternative Scenarios



• Slightly lower interest rate path compared to the baseline.

Sensitivity Analysis – Oil Prices (-25 USD/b for two years)




- Foreign variables simulated using NiGEM;
- Impact on domestic inflation around 0.4 p.p.;
- Lower domestic interest rates mainly due to lower interest rates abroad.

Publication of the CZK/EUR Forecast

- Starting from the first forecast in 2009 the CNB will publish its forecast for nominal exchange rate CZK/EUR in numerical form, as a fan chart.
- The decision follows from the CNB positive experience of publishing the forecast-consistent interest rate path.
- The disclosure of the CZK/EUR exchange rate forecast in numerical form will mean that full transparency of the CNB forecast will be achieved.
- Similarly to the forecast of other variables, the exchange rate outlook is conditional on forecast assumptions and information available at the time when the forecast is drawn up.

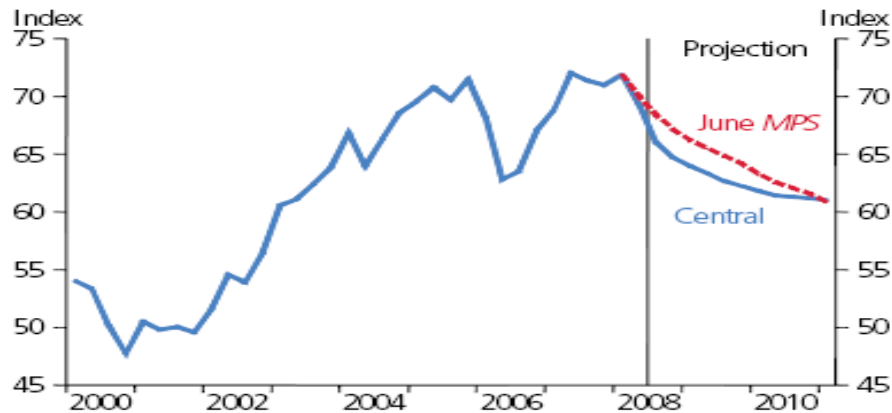
Foreign Experience

- Many central banks assume constant exchange rate (e.g. ECB, Canada, Hungary);
- Some central banks do not publish the exchange rate forecast at all (e.g. Fed, Slovakia);
- Some central banks describe the forecast only verbally (e.g. BoE (effective ER), Israel, Chile, Poland, CNB until now);
- Several central banks publish the effective exchange rate forecast (New Zealand, Norway, Sweden, Iceland);
- Columbia published the exchange rate forecast for a short period of time (like the interest rate forecast).

 ⇒ The CNB will become the only central bank to publish exchange rate forecast vis-à-vis a specific currency.

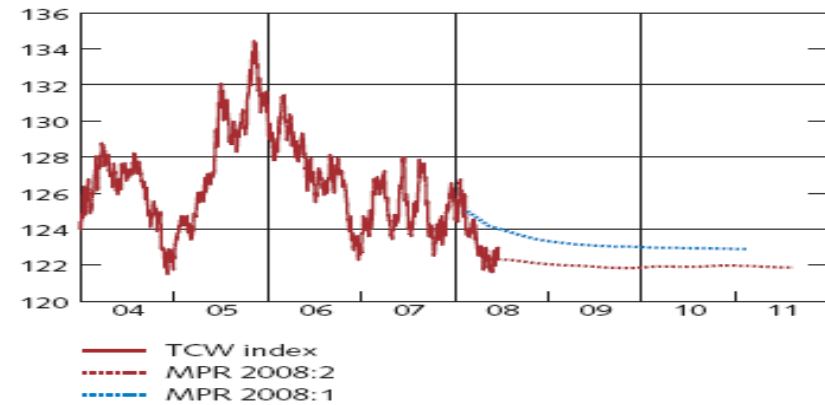
Foreign Experience – NZ, Sweden, Norway, Iceland

Nominal TWI assumption



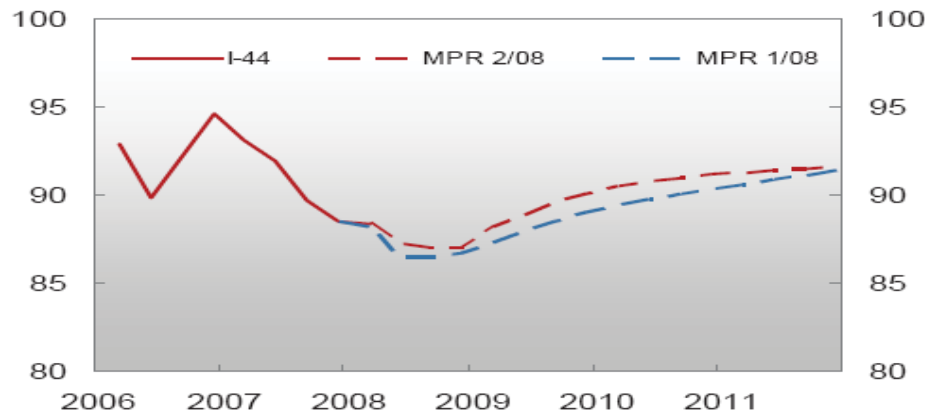
Source: RBNZ estimates.

Figure 20. TCW exchange rate Index, 18.11.92 = 100



Source: The Riksbank

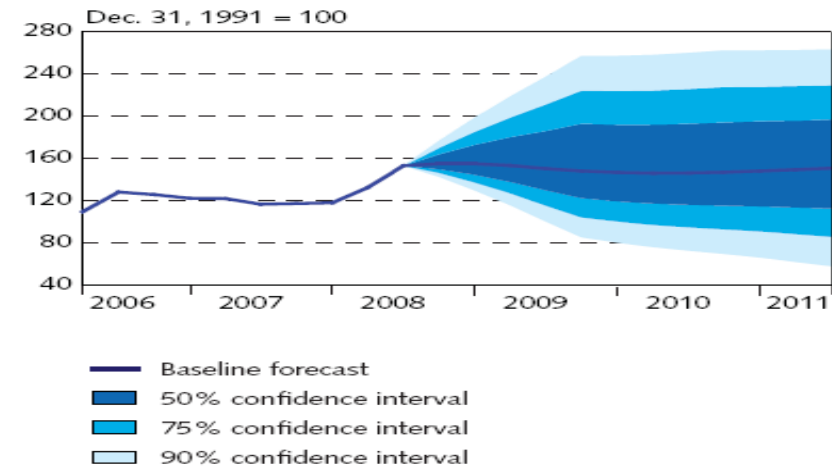
Chart 1.23 Import-weighted exchange rate (I-44) in the baseline scenario in MPR 1/08 and MPR 2/08.¹⁾ Index. 2006 Q1 – 2011 Q4



¹⁾ A rising curve denotes a weaker krone exchange rate. The exchange rate path is based on uncovered interest rate parity. Source: Norges Bank

Effective exchange rate

Forecasting period Q3/2008 - Q2/2011



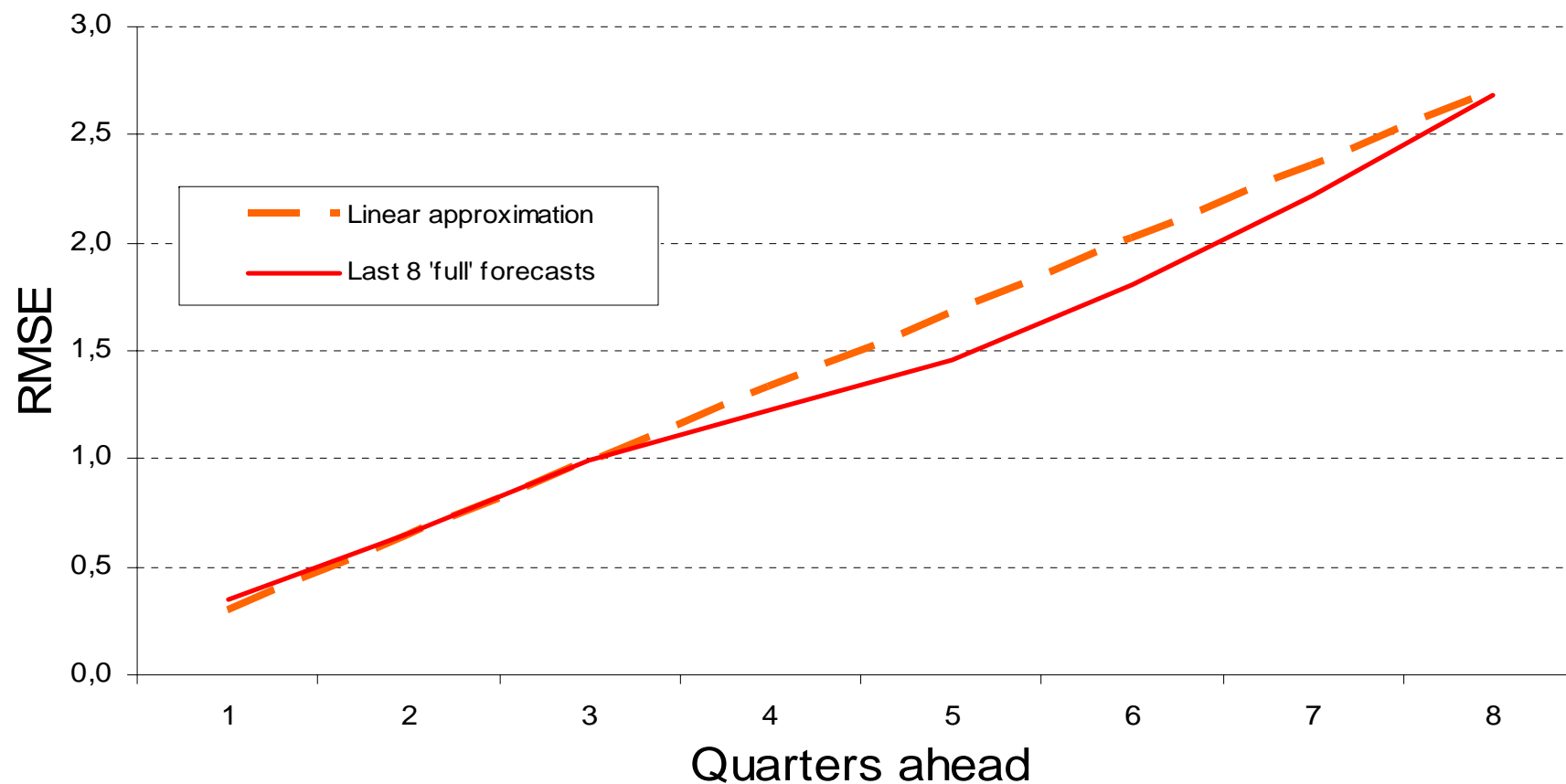
Source: Central Bank of Iceland.

Construction of the Fan Chart

- The same approach as in the fan charts for other variables:
- Constructed as symmetric around the baseline;
- Confidence intervals based on RMSE statistic and assumed normal distribution;
- RMSE calculated from 8 past forecasts which can be evaluated for all 8 forecast quarters;
- RMSE „smoothed“ by linear approximation;
- Updated once a year in January.

RMSE of CNB's Past Forecasts for the Exchange Rate

RMSE - CZK/EUR exchange rate (update in Nov 2008)



⇒ Forecast uncertainty is huge, increases linearly for more distant future.

Interpretation of Fan Chart

- Fan chart is just a forecast;
- Exchange rate is not a policy variable – the forecast presents no commitment or preference of the CNB!
- It shows the general uncertainty, not specific uncertainty for the given forecast;
- For specific uncertainty and risks: watch the press conferences, Minutes, alternative scenarios, public statements, meeting with analysts etc.



Thank you
for your attention.

(Tomas.Holub@cnb.cz)